

REMARKS/ARGUMENTS

Claims 1-4, 7, 8, 11-21, and 23-33 stand provisionally rejected for obviousness-type double patenting over claims in the parent application, SN 10/346,681. However, said application has been abandoned by failure to respond to an Office Action; accordingly, this rejection should be withdrawn.

Claims 18-30 stand rejected as anticipated by, or obvious over, Ogawa. All claims stand rejected as obvious over combinations of Ogawa with certain secondary references.

Ogawa discloses improved acrylamide gels with much reduced brittleness, that are easier to handle, capable of being cut into a desired shape, usable for producing a gel column for use in disk electrophoresis, and in general having improved elasticity. This is accomplished by including in the gel 1-50 wt.%, preferably approximately 5-30 wt.%, of a water-soluble polymer. Suitable water-soluble polymers mentioned are polyvinylalcohol, polyvinylpyrrolidone, polyacrylamide, polyethylene glycol and polypropylene glycol. These are all discussed at col. 3 lines 15-41.

Applicant's invention is aimed at providing a different property to polyacrylamide gels, namely lessening the tendency of the gels to stick to plates and producing decreased formation of shadow bands.

In the previous amendment, Applicant amended the claims to recite a storage time for the gel of at least five days before use. In the Office Action, the Examiner comments that this does not distinguish Applicant's gels from those of Ogawa. On reviewing the matter, by this amendment Applicant no longer relies on this distinction and consequently has deleted this clause from claims 1 and 18. Instead, Applicant has now amended these claims to specify that the gel contains from about 0.01 to about 0.3 % of a nonionic amphiphilic polymer selected from polyethylene oxide and polyethylene glycol.

While Ogawa disclose the use of polyethylene glycol, he does not mention polyethylene oxide. In addition, Ogawa states that in order to achieve his results, the polymer must be present in an amount of about 1-50% by weight, preferably about 5-30%.

Since Applicant's gels contain significantly less polyethylene glycol than disclosed in Ogawa, and provide a different effect, the claims are not anticipated by Ogawa, and Applicant respectfully requests that this rejection be withdrawn.

On the question of obviousness over Ogawa the Examiner postulated that "if one only wanted to add a small amount of elasticity to the gel and is willing to tolerate a degree of brittleness, one would have been motivated to utilize an even smaller amount of amphiphilic polymer in order to arrive at a gel having properties that lie between the properties of the gels of Ogawa and the prior art that preceded it."

Applicant submits, however, that those skilled in the art would not take such action, based on the disclosure of Ogawa, and would have no motivation to do so.

Ogawa discloses an invention that is aimed at overcoming a problem in the prior art - brittleness of gels. The solution involves inclusion of at least about 1 wt.%, and preferably at least about 5 wt.%, of his polymers. Those skilled in the art, seeking to avoid the brittleness problem, would have no reason to make a somewhat less brittle gel than the prior art, as that would not provide the desired improvement, for instance of being able to cut the gel. Furthermore, there is no basis in Ogawa for concluding that any amount of polymer less than 1% would produce any desirable effect at all. Persons seeking an improved gel are not interested in half measures, and would not use as little as 0.3% of polyethylene glycol for any purpose, based on Ogawa, or any amount of polyethylene oxide (which is not mentioned in Ogawa). They would have no reason to expect any improvement from the use of such small amounts of polymer. Moreover, Ogawa does not disclose any solution to the problems of shadow band formation or adherence to the plates.

Applicant submits that the current claims are neither anticipated by nor obvious from Ogawa, and requests withdrawal of these rejections.

The secondary references (Sylvester, Alpenfels, Bluestein, Monte and Takeda) are cited for features other than the amphiphilic polymer, and indeed do not contain disclosures of use of an amphiphilic polymer. For that reason, the current claims are not obvious over combinations of Ogawa with any of the cited secondary references, since such combinations do

not make obvious the use of from about 0.01 to about 0.3 wt. % polyethylene glycol or polyethylene oxide in a polyacrylamide gel.

CONCLUSION

In view of the foregoing, Applicant believes that all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned.

Respectfully submitted,

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